UNIVERSUM 027.664 2

MODEL

SERVICE MANUAL

> 1mV RF 6,4V
<20uV RF 10,2V
VCR-sign. 2,1V
No sign. 0,2V

50 Hz-sign. 11,7V
60 Hz-sign. 7,6V
No sign. 0,1V

ICe7 TDA4566

ICh1 TDA2579A

ICh2 TDA 8432

1/3*ICe2

ICe4 TDA8461

BC547B

BD241A

BZX832 5V6

RF	3m4	3m0	3m2
••	Videocolor CTR	Toshiba	Philips/ITT
Rk9	68 1/2W	68 1/2W	100 1/2W
Rk13	220 1/4W	270 1/4W	560 1/4W
Rk11,12	68 1/2W	68 1/2W	100 1/2W
Rk21	4k7	5k1	4k7 1/4W
Rk24	2R7 1/4W	2R2 1/4W	2R2 1/4W
Rk26	2R7 1/4W	2R2 1/4W	1R8
Rk27	1k2	-	1k2
Rk28	1k2	2k2	1k2
VS 300	NO	YES	NO

E TP 47 H — 1 V/div — 10 µs/div — 4,0 V

C TP 31 H S-VHS — 200 mV/div — 10 µs/div — 5,2 V

H TP 53 H — 500 mV/div — 10 µs/div — 4,5 V

H TP 56 V — 1 V/div — 5 ms/div — 7,0 V

E TP 48 H — 1 V/div — 10 µs/div — 4,0 V

E TP 49 V
H TP 52 V — 500 mV/div — 200 µs/div — 2,0 V

H TP 54 H — 1V/div — 10 µs/div — 0 V

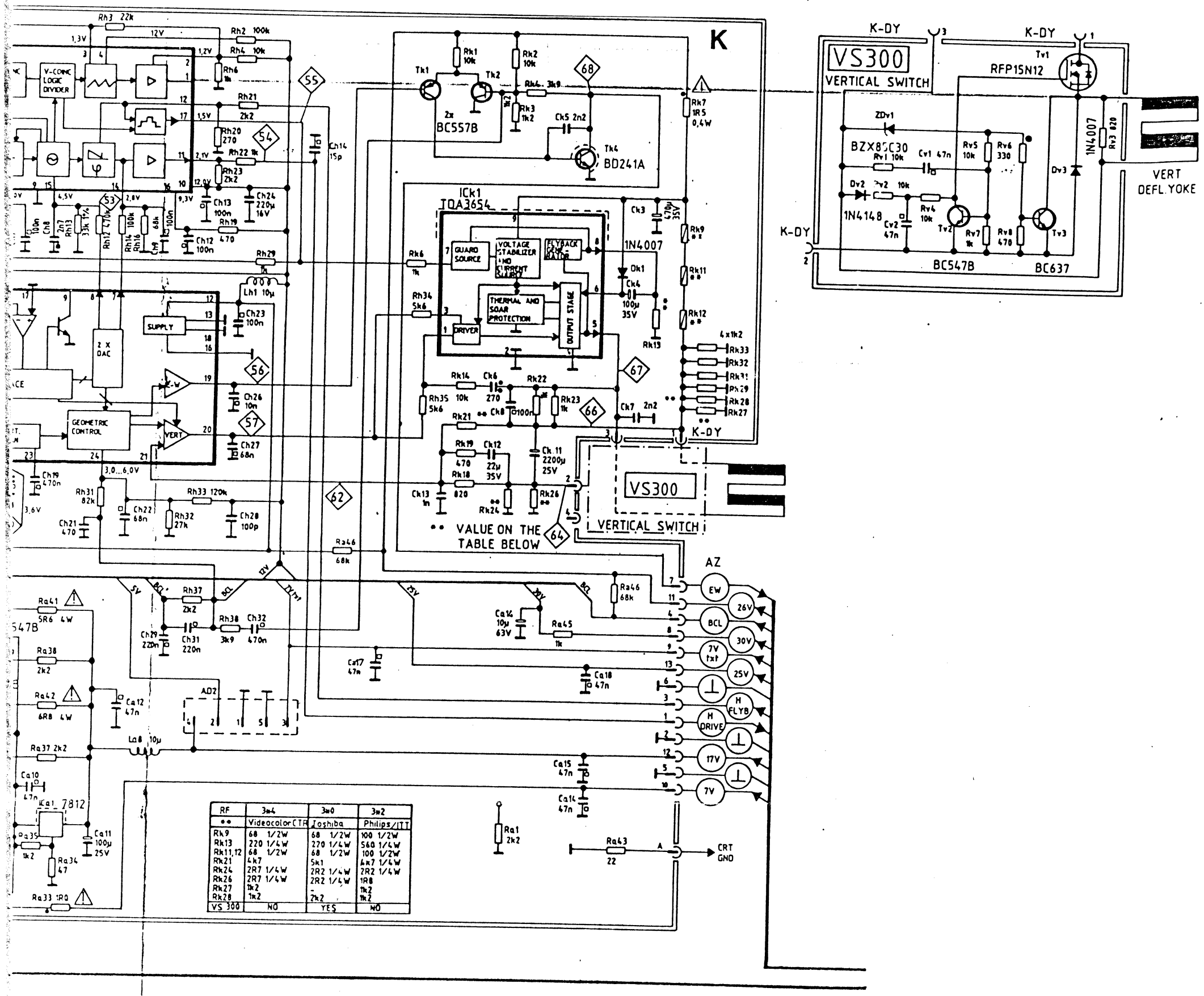
H TP 57 V — 500 mV/div — 5 ms/div — 0 V

C TP 29 H S-VHS — 200 mV/div — 10 µs/div — 2,6 V

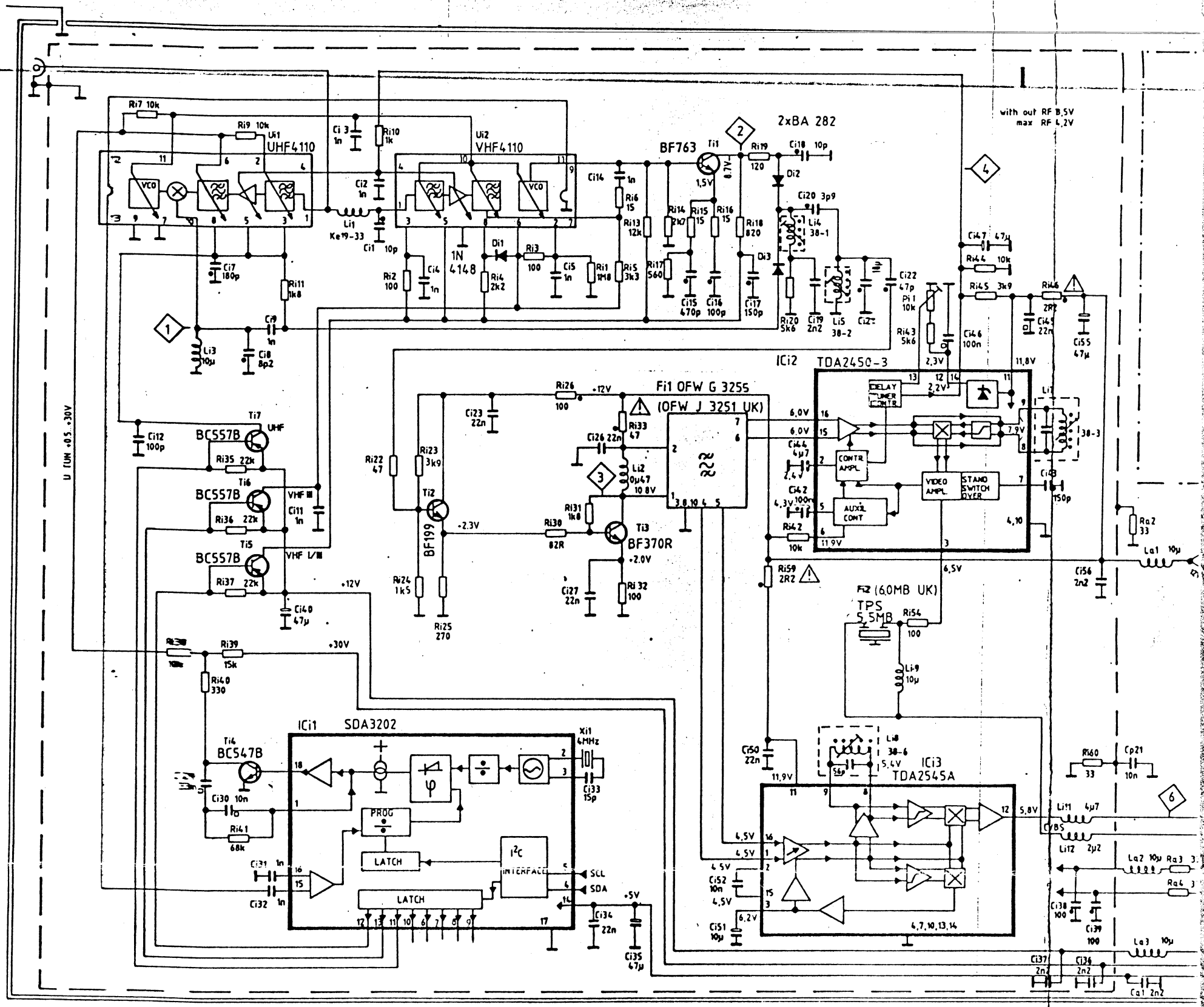
H TP 51 V — 1V/div — 5 ms/div — 0 V

H TP 55 H — 2 V/div — 10 µs/div — 0 V

H TP 58 V — 2V/div — 5 ms/div — 0 V



RF	3m4	3m0	3m2
••	Videocolor CTR	Toshiba	Philips/ITT
Rk9	68 1/2W	68 1/2W	100 1/2W
Rk13	220 1/4W	270 1/4W	560 1/4W
Rk11,12	68 1/2W	68 1/2W	100 1/2W
Rk21	4k7	5k1	4k7 1/4W
Rk24	2R7 1/4W	2R2 1/4W	2R2 1/4W
Rk26	2R7 1/4W	2R2 1/4W	1R8
Rk27	1k2	-	1k2
Rk28	1k2	2k2	1k2
VS 300	NO	YES	NO



200 mV/div 10 µs/div
I TP 3 H
11,0 V

200 mV/div 10 µs/div
A TP 6 H
6,0 V

500 mV/div 10 µs/div
A TP 7 H
6,0 V

500 mV/div 500 µs/div
P TP 8 H
6,0 V

200 mV/div 200 µs/div
D TP 9
6,0 V

200 mV/div 200 µs/div
D TP 11
6,0 V

UNIVERSUM

FT 7103

83101266

DD341

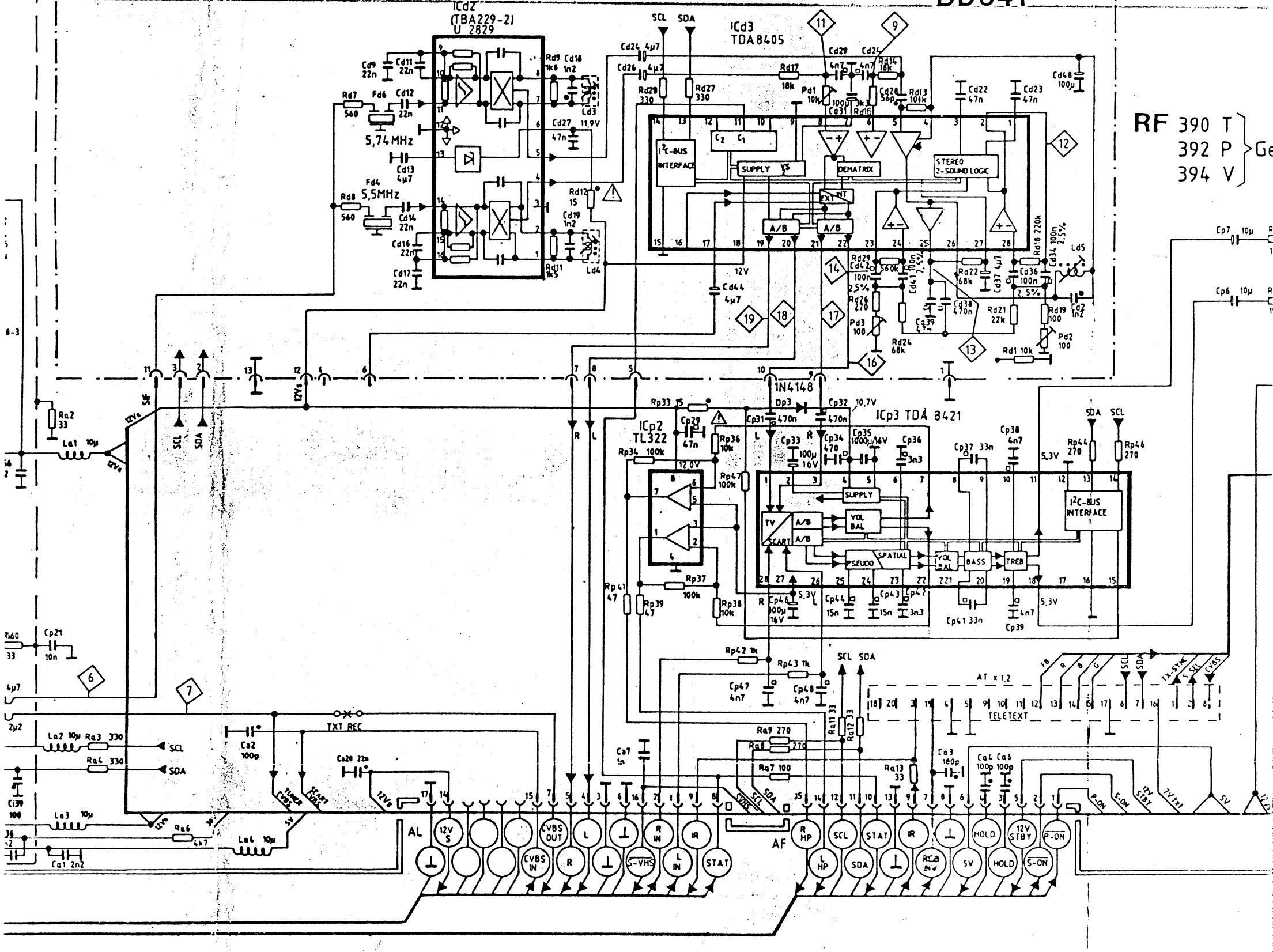
RF 390 T
392 P
394 V

ICdZ (TBA229-2) U 2829

ICd3 TDA 8405

ICp2 TL322

ICp3 TDA 8421



D TP 12 — 2 V/div — 1 ms/div — 0 V

D TP 16 — 500 mV/div — 200 µs/div — 6,0 V

D TP 17 — 6,0 V

E TP 24 H — 100 mV/div — 10 µs/div — 6,0 V

E TP 28 H — 200 mV/div — 10 µs/div — 8,0 V

D TP 13 — 500 mV/div — 2 ms/div — 8,0 V

E TP 22 H — 200 mV/div — 10 µs/div — 4,0 V

E TP 26 H — 200 mV/div — 10 µs/div — 5,4 V

E TP 32 H SECAM — 500 mV/div — 20 µs/div — 3,0 V

D TP 14 — 2V/div — 2 ms/div — 0 V

E TP 23 H — 200 mV/div — 10 µs/div — 4,0 V

E TP 27 H — 100 mV/div — 10 µs/div — 6,4 V

E TP 32 H PAL — 200 mV/div — 10 µs/div — 8,6 V

* (SECAM)

390 T
392 P } Germany
394 V

P

E

CC302

TDA 8451

TOKO37-15

ICc1 TDA8490

ICe3 TDA 8452

2/3* ICe2 4053

TDA4935 ICp4

LT360

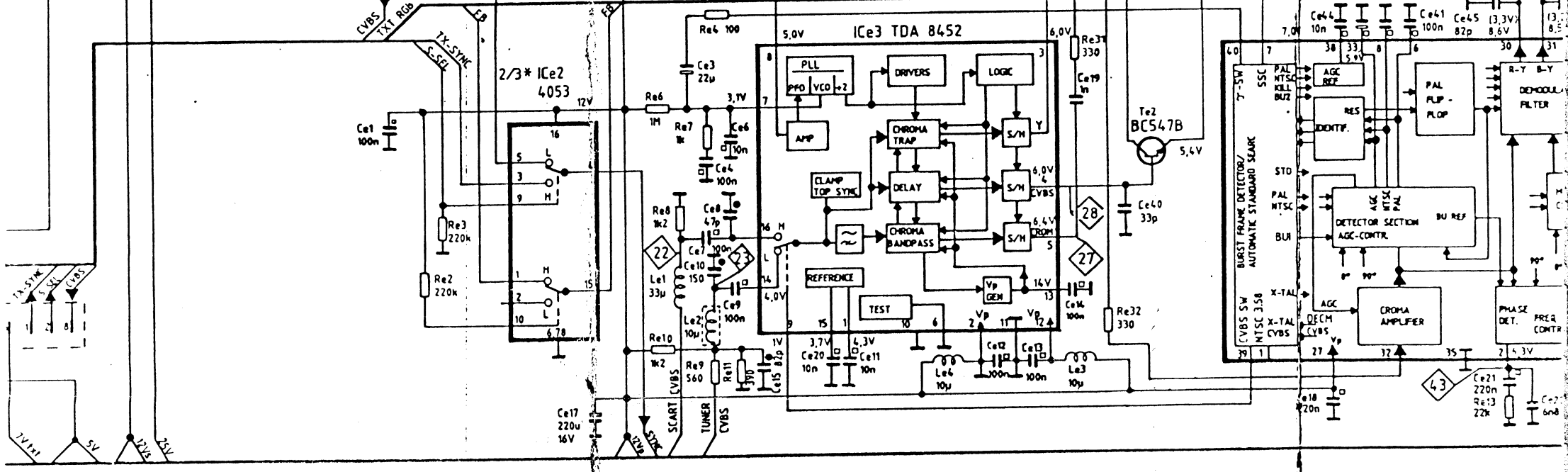
BD241A

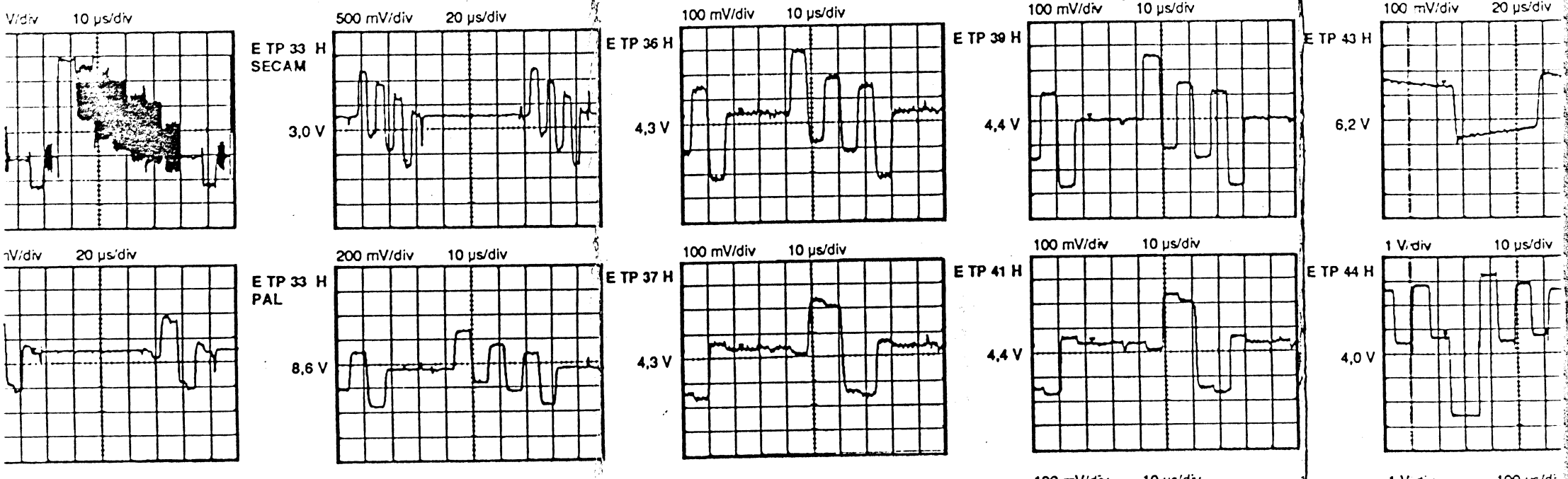
BC327-25

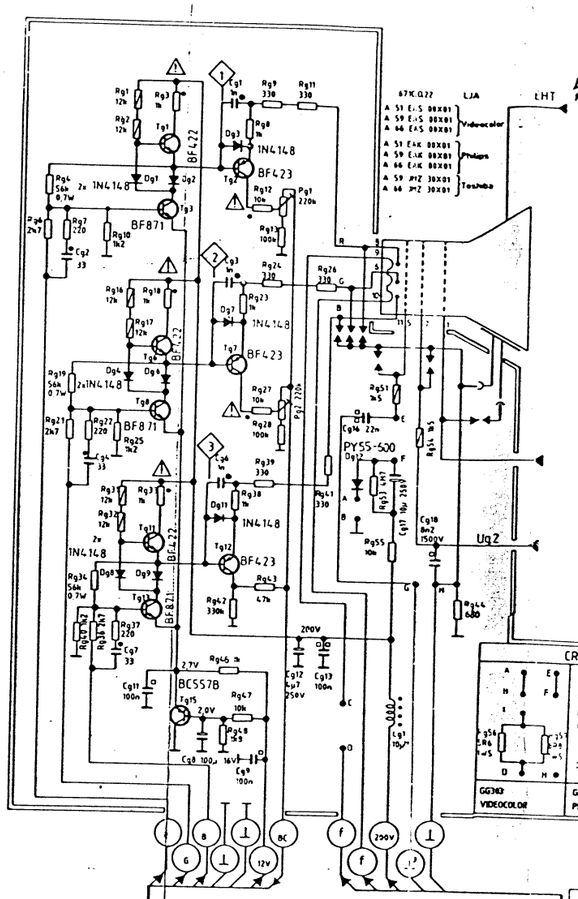
BC547B

BC547B

TDA 8451





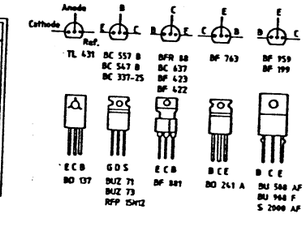


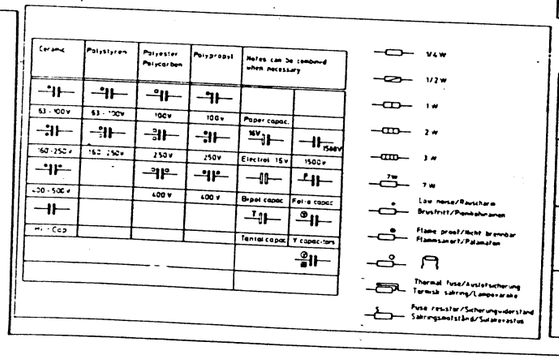
B/B-Y = BLUE OR B-Y COLOUR DIFFERENCE SIGNAL
G/Y = GREEN OR LUMINANCE SIGNAL
R/R-Y = RED OR R-Y COLOUR DIFFERENCE SIGNAL
FB = FAST BLANKING SIGNAL
R OUT = RIGHT AUDIO CHANNEL
L OUT = LEFT AUDIO CHANNEL
SCL = SERIAL CLOCK
SDA = SERIAL DATA
R IN = RIGHT AUDIO CHANNEL
L IN = LEFT AUDIO CHANNEL
CVBS IN = VIDEO SIGNAL
CVBS OUT = VIDEO SIGNAL
RC = REMOTE CONTROL
STA = STATUS FROM SCART 1
STA2 = STATUS FROM SCART 2

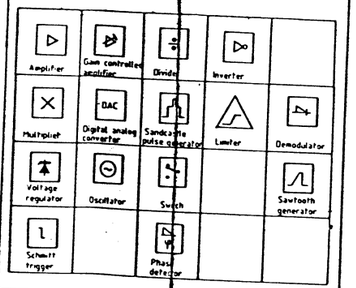
L HP = LEFT AUDIO CHANNEL FOR HEADPHONES
R HP = RIGHT AUDIO CHANNEL FOR HEADPHONES
SAT COPY = SATELLITE COPYING
MOD 1 = MODE INFORMATION 1
MODE 2 = MODE INFORMATION 2
RGB INV = RGB INVERTING
HOLD = PROCESSOR DISCONNECTING FROM I²C-BUS
P-ON = PICTURE ON DRIVING VOLTAGE 12 V
S-ON = SOUND ON DRIVING VOLTAGE 12 V
BC = BLACK CURRENT
EW = EAST-WEST RASTER CORRECTION
BCL = BEAM CURRENT LIMITING VOLTAGE
7V TXT = SUPPLY VOLTAGE FOR TELETEXT MODULE
H FLYB = LINE FLYBACK
H DRIVE = DRIVE PULSES FOR LINE OUTPUT STAGE
f = FILAMENT VOLTAGE FOR CRT

PW300 VIDEOCOLOR
310 PHILIPS
320 TOSHIBA

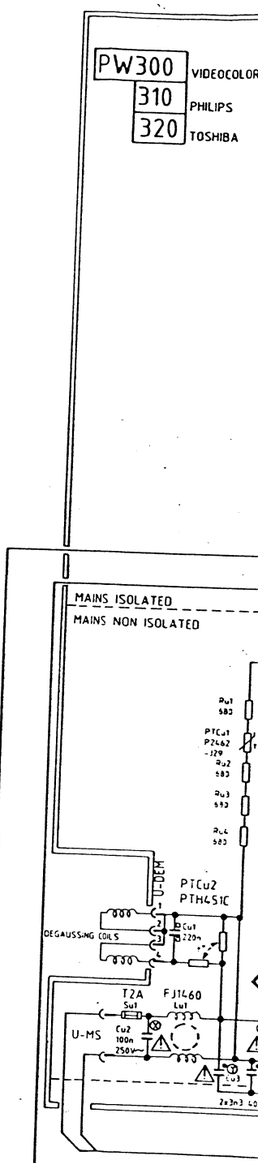
MAINS ISOLATED
MAINS NON ISOLATED

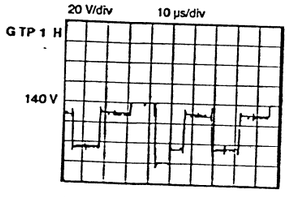


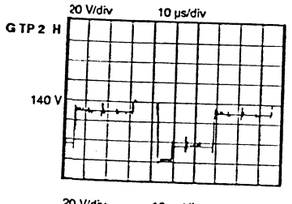


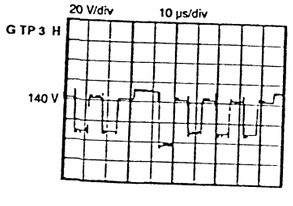


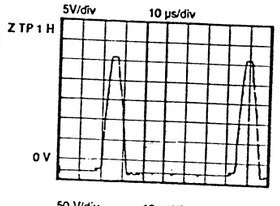
⚠ Critical safety component. Use identical component for replacement.

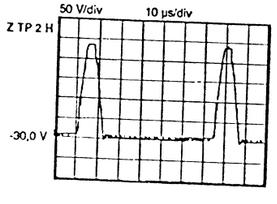


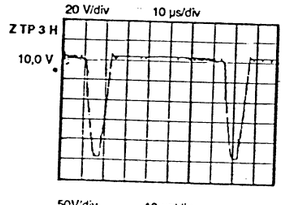


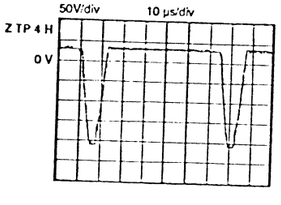


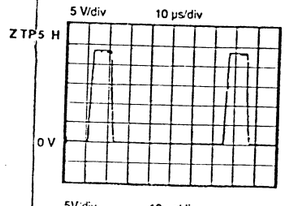


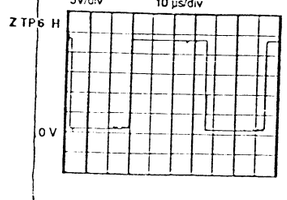


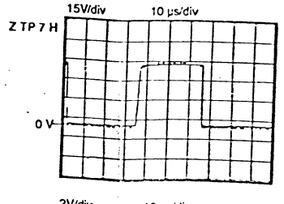


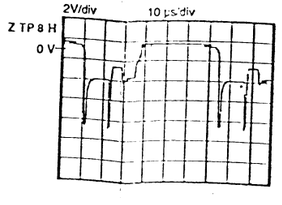


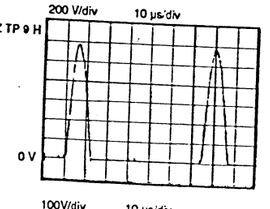


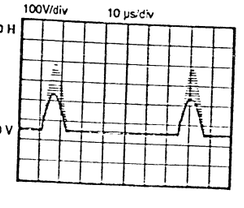


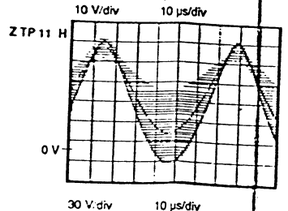


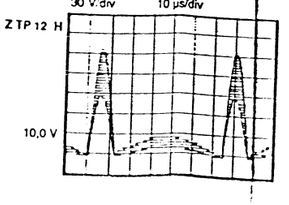


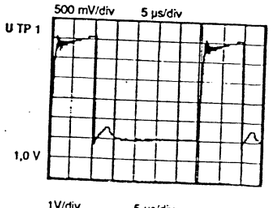


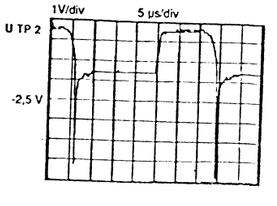


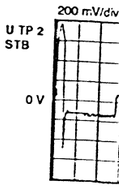


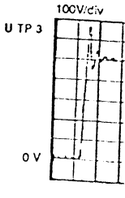












PW300 VIDEOCOLOR
310 PHILIPS
320 TOSHIBA

MAINS ISOLATED

MAINS NON ISOLATED

to LL-mod.

Z-G

Z-A

Z-DY

HOR DEFL. YOKE

FOCUS

EHT 25kV

PW320
• Mz3: FM1644
• Cz13: 8n7 1600V
FU1200

PW310
• Mz3: FM1645
• Cz13: 8n6 1630V
FU1201

PW300
• Mz3: FM1644
• Cz13: 8n7 1600V
FU1200

PY55-600

1N4007

BU508A

BC547B

BC637

BC548B

BY228

BY299

BZX83 B30

BY399

BY133

F1,25A

T2A

FJ1460

PTCu2 PTH451C

TDA 4601-D

Mu1 472926-00

Mz1 472914

Mz2 83610

YC300

FC302

NC303

COMMON

LEDy1 HD11056p

LEDy2 HD11056p

SP_SOUND
I_SOUND
II_SOUND

ICf1 SDA2526

ICf2 8052

JC IR_RECEIVER

RS-232

U TP 2 STB
200 mV/div 5 µs/div
0 V

U TP 3 STB
100 V/div 5 µs/div
300 V

U TP 4 STB
50 mV/div 5 µs/div
2,1 V

U TP 6
10 V/div 5 µs/div
0 V

F TP 2
2 V/div 50 µs/div
0 V

F TP 4
1 V/div 2 ms/div
0 V

L TP 5 H
500 mV/div 10 µs/div
2,5 V

U TP 3
100 V/div 5 µs/div
0 V

U TP 4
200 mV/div 5 µs/div
2,0 V

U TP 5
200 mV/div 5 µs/div
0 V

F TP 1
200 mV/div 5 ms/div
4,0 V

F TP 2
2V/div 20 ms/div
0 V

F TP 4
1 V/div 20 ms/div
0 V